42 mothers, and 31–39 weeks in 7 mothers. 32 patients were found to have CHD (32%); 25 out of the 52 mothers with abnormal obstetric sonogram (48%), 4 out of the 26 mothers with positive past history for CHD (15%), and 3 out of the 22 mothers with systemic disease (14%). CHD were of different expressions ranging from simple cardiac defects to complex lesions, as well as cardiac arrhythmias.

Discussion: Fetal echocardiography has been introduced as an essential antenatal procedure for high risk pregnancies. It proved great value to diagnose many cardiac defects and help giving time to think of available plans of management. In our institution we evaluated 100 mothers and diagnosed 32 fetuses to have different types of CHD and help in making their cardiac plans as well as assurance of other 68 mothers with normal fetal echocardiography.

Conclusion: Fetal echocardiography evaluation is important for antenatal cardiac diagnosis and postnatal management plans. Almost all types of CHD can be detected with 2-D echocardiography. Collaboration with perinatologists is of great importance to improve this service.

doi:10.1016/j.jsha.2011.02.045

SHA 045. Do we need deep hypothermia and circulatory arrest for IAA repair?

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Background: Deep hypothermic circulatory arrest (CA) was used extensively, to facilitate repair of congenital heart defects providing a bloodless field. The limited "safe" time, incidence of seizures, choreoathetosis, and the impact on the neurodevelopment outcome, prompted to explore safer strategies. Innominate artery cannulation, moderate hypothermia with low flow rate (LFR), are our alternative Method 1999–2009, 50 patients with IAA without other anomalies, had complete repair, 31 (62%) Type B and 19 (38%) IAA type C all with VSD. The following variables were analyzed; age at surgery, weight (WT), gender, surgery , pump time (CPBT), cross-clamp time (CX), degree and time of hypothermia, CA, ICU stay, complications (sterna wound infection, ARF), hospital stay and in-hospital death.

Results: Included patients 21M–29F; age (1–71 d); WT (2.6–5.2 kg); CPBT (68–342 min) mean 205, CX (32–165 min) 98.2, hypothermia (24–19 degree) LFR (35–25 mts). 6 had CA for (17–53 min). 5 left OR with chest open, all had uneventful delay sternal closure. Wound infection 3. The ICU (6–122 d), the hospital stay 7–300 d. One death IAA (type B).

doi:10.1016/j.jsha.2011.02.046

SHA 046. Waiting time between the referral date from primary cardiac center and the transfer date to tertiary cardiac centers of critical congenital heart diseases

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Objectives: Assess the time interval needed for tertiary Centers to accept critical congenital heart diseases.

Methods: All patients with congenital heart diseases on prostaglandin infusion referred to tertiary surgical Centers between 5-2007 and 5-2010 (three years) were included in the study, time interval were calculated by days from the time of sending the report to the transfer date.

Patients who were Non-Saudi, dysmorphic features, down syndrome, preterm had severe neurological insult, or had diagnosis of Hypoplastic Left Heart Syndrome were excluded from the study (however, their details will be discussed).

Result: 65 patients were included with total waiting days of 413 giving average waiting time of 6.4 days. Total of 9 patients (12%) expired while waiting for the transfer.

Conclusion: Tertiary Pediatric Cardiac Centers in Saudia Arabia deserve more support to improve their abilities in treating sick babies.

doi:10.1016/j.jsha.2011.02.047

SHA 047. Mid-term outcome of single-stage repair of interrupted aortic arch using antegrade selective cerebral perfusion

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Background: Management of interrupted aortic arch (IAA) remains challenging, although in recent years overall mortality appears to be improving. Long-term morbidity and need for repeated interventions are areas of concern.

Methods: Retrospective chart review for all IAA cases underwent surgical repair between March 1st 2003 and end of December 2010, intra and post operative data will be analyzed.

Results: Total number were 50 cases. Male to female ratio 2/3 with mean age 35.8 days, mean weight 3.19 kg, ranging between 1.43 and 4.12 kg. Preoperatively, 46% were mechanically ventilated. 88% cases were repaired on pump. Total circulatory arrest used only in 14% of cases and selective antegrade cerebral perfusion was done in 74% of cases with moderate hypothermia down to 27 °C. Reported post operative complication were prolonged ventilation 20%, Septicemia 20% delayed sternal closure 16%, acute renal failure 10%, stridor 10%, seizures 8% but no cases suffered from CVA. Median ICU stay was 15 days and hospital stay was 22 days. Mortality includes one early day 7 post-op and one late one year after. Mean follow up was 40 months ranging between 10 and 87 months, residual sub aortic stenosis 4% arch restenosis 8%. No surgical intervention have been done for any case but two cases were underwent balloon angioplasty. No cases suffered from LT main bronchus stenosis or compression.

Conclusion: Single-stage repair using antegrade selective cerebral perfusion provides satisfactory med-term results though the debate continues over its advantages over staged approach particularly in association with complex anomalies.

doi:10.1016/j.jsha.2011.02.048

SHA 048. Large pulmonary arteriovenous malformation antenatal diagnosis and successful closure by interventional catheterization

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Methods: Large pulmonary fistula was diagnosed in two patients one from LPA and the other from RPA connecting to